

A Continuous Alumina Fiber Spunlace Paper Preparation Device and Process

Abstract

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The present invention belongs to the technical field of textile materials. Disclosed are a continuous alumina fiber spunlace nonwoven preparation device and process. The device comprises a storage tank; the storage tank is connected to a spinning die by means of a pipe; a draft device is provided below the spinning die; a negative-pressure suction ventilator is provided below the draft device, a
10 mesh belt is provided between the draft device and the negative-pressure suction ventilator; a conveyor belt drives the mesh belt between the draft device and the negative-pressure suction ventilator to successively pass through a high-temperature furnace, a spunlacing machine and a dryer. Alumina fiber filaments prepared by the present invention are less liable to break, and have lengths of 20% greater than those of common alumina filaments. The spunlacing process is simple and
15 convenient, causes less damage to continuous alumina fibers, involves few impurities during the spunlacing process, and produces flat and smooth surfaces by spunlacing a front surface and a back surface. The tensile strength of the prepared continuous alumina fibers is 38.7% or above greater than that of common chopped fiber paper. Because of lack of a short fiber binder, the surface density can be reduced by 13.2%, achieving the ultra-thin effect. A continuous alumina fiber spunlace paper
20 preparation device and process.

(Figure 1)